

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Currently Amended) A method of screening for selected genes of an industrial yeast comprising: participating in increase in productivity and/or improvement in flavor in the production of an alcohol or an alcoholic beverage, characterized in that, (a) the whole genome sequence of industrial yeast is analyzed, (b) the sequence is compared with that of *Saccharomyces cerevisiae*,

(a) comparing polynucleotide sequences of an industrial yeast to genes of *Saccharomyces cerevisiae* (*S. cerevisiae*);

(b) selecting a polynucleotide sequence of the industrial yeast encoding an amino acid sequence having 70 to 97% identity to an amino acid sequence encoded by an *S. cerevisiae* gene; and,

(c) a gene of the industrial yeast encoding an amino acid sequence having 70 to 97% identify to an amino acid sequence encoded by the *S. cerevisiae* gene of *Saccharomyces cerevisiae* is selected, and (d) functional analysis of the selected gene is carried out, whereby the character given to the yeast by the gene is identified

(c) determining function of the selected industrial yeast gene.

Claim 2 (Currently Amended) The method according to Claim 1, further comprising using wherein a DNA array is used for the functional analysis in step (c) [(d)].

Claim 3 (Previously Presented) The method according to Claim 2, wherein said DNA array comprises one or more oligonucleotides adhered to a solid support; said one or more oligonucleotides comprise a DNA sequence having 10 to 30 nucleotides existing in an open reading frame of the whole genome sequence of an industrial

yeast and not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence, or its complementary DNA sequence.

Claim 4 (Previously Presented) The method according to Claim 3, wherein said one or more of oligonucleotides are hybridized under a stringent condition.

Claim 5 (Previously Presented) The method according to Claim 2, wherein said DNA array comprises one or more oligonucleotides adhered to a solid support; said one or more oligonucleotides comprise a DNA sequence having 10 to 30 nucleotides existing in a non-coding region of the whole genome sequence of an industrial yeast and not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence.

Claim 6 (Previously Presented) The method according to claim 5, wherein said one or more of oligonucleotides are hybridized under a stringent condition.

Claim 7 (Previously Presented) The method according to Claim 3, wherein said DNA array comprises two or more oligonucleotides.

Claim 8 (Currently Amended) The method according to Claim 1, wherein the industrial yeast is a brewing yeast.

Claim 9 (Currently Amended) The method according to Claim 1, wherein the brewing yeast is a beer yeast.

Claim 10 (Withdrawn) A gene which is obtained by the screening method according to Claim 1.

Claim 11 (Withdrawn) The gene according to Claim 10, which is characterized by the concentration of sulfite in a culture medium of yeast when said gene is expressed in yeast.

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Claim 12 (Withdrawn) DNA which comprises a DNA sequence represented by SEQ ID NO: 1 or 2, and DNA which hybridizes to said DNA under stringent condition.

Claim 13 (Withdrawn) DNA which encodes a polypeptide having an amino acid sequence represented by SEQ ID NO: 3 or 4, and DNA which encodes polypeptide having an amino acid sequence in which one to several amino acid residues are deficient, substituted, added or a combination thereof in an amino acid sequence represented by SEQ ID NO: 3 or 4.

Claim 14 (Withdrawn) A recombinant vector containing the gene of Claim 10.

Claim 15 (Withdrawn) The recombinant vector according to Claim 14, wherein a promoter, a terminator, or both are placed adjacent to said gene.

Claim 16 (Withdrawn) The recombinant vector according to Claim 15, wherein said promoter shows constitutive expression.

Claim 17 (Withdrawn) The recombinant vector according to Claim 15, wherein said promoter is a promoter of glyceraldehydes-3-phosphate dehydrogenase gene.

Claim 18 (Withdrawn) A transformant containing the gene according to Claim 10.

Claim 19 (Withdrawn) The transformant according to Claim 18, wherein said transformant belongs to yeast of genus *Saccharomyces*.

Claim 20 (Withdrawn) A polypeptide encoded by the gene according to Claim 10 or a polypeptide having an amino acid sequence in which one to several amino acid residues are deficient, substituted, added, or a combination thereof in an amino acid sequence in the said polypeptide.

Claim 21 (Withdrawn) A polypeptide having an amino acid sequence represented by SEQ ID NO: 3 or 4 or a poly peptide having an amino acid sequence in which one to several amino acid residues are deficient, substituted, added, or a combination thereof in the amino acid sequence represented by SEQ ID NO: 3 or 4.

Claim 22 (Withdrawn) A method for the production of an alcohol or an alcoholic beverage comprising subjecting the transformant according to Claim 18 to fermentation in a sugar-containing medium selected from the group consisting of wort, grape juice, rice juice and glucose syrup.

Claim 23 (Withdrawn) A breeding method of yeast which is suitable for the production of an alcohol or an alcoholic beverage comprising controlling expression of the gene according to Claim 10.

Claim 24 (Withdrawn) The breeding method according to Claim 23, wherein the yeast belongs to the genus *Saccharomyces*.

Claim 25 (Withdrawn) Yeast obtained by the breeding method according to Claim 23.

Claim 26 (Withdrawn) A method or the production of an alcohol or an alcoholic beverage comprising using the yeast according to Claim 25.

Claim 27 (Withdrawn) An alcohol or an alcoholic beverage which is produced using the method for the production of an alcohol or an alcoholic beverage according to Claim 26.

Claim 28 (Withdrawn) A DNA array comprising one or more oligonucleotides adhered to a solid support;

said one or more oligonucleotides comprise a DNA sequence having 10 to 30 nucleotides existing in an open reading frame of the whole genome sequence of an industrial

yeast and not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence, or its complementary DNA sequence.

Claim 29 (Withdrawn) The DNA array according to Claim 28, wherein said one or more of oligonucleotides are hybridized under a stringent condition.

Claim 30 (Withdrawn) A DNA array comprising one or more oligonucleotides adhered to a solid support;

said one or more oligonucleotides comprise a DNA sequence having 10 to 30 nucleotides existing in a non-coding region of the whole genome sequence of an industrial yeast and not existing in the region other than the region of said 10 to 30 nucleotides sequence in the whole genome sequence, or its complementarty DNA sequence.

Claim 31 (Withdrawn) The DNA array according to Claim 30, wherein said one or more of oligonucleotides are hybridized under a stringent condition.

Claim 32 (Withdrawn) The DNA array according to Claim 28, wherein said DNA array comprises two or more oligonucleotides.

Claim 33 (Previously Presented) The method according to Claim 5, wherein said DNA array comprises two or more oligonucleotides.

Claim 34 (Withdrawn) A recombinant vector containing the DNA of Claim 11.

Claim 35 (Withdrawn) The recombinant vector according to Claim 34, wherein a promoter, a terminator, or both are placed adjacent to said DNA.

Claim 36 (Withdrawn) The recombinant vector according to Claim 35, wherein said promoter shows constitutive expression.

Claim 37 (Withdrawn) The recombinant vector according to Claim 35, wherein said promoter is a promoter of glyceraldehyde-3-phosphate dehydrogenase gene.

Claim 38 (Withdrawn) A recombinant vector containing the DNA of Claim 12.

Claim 39 (Withdrawn) The recombinant vector according to Claim 38, wherein a promoter, a terminator, or both are placed adjacent to said DNA.

Claim 40 (Withdrawn) The recombinant vector according to Claim 39, wherein said promoter shows constitutive expression.

Claim 41 (Withdrawn) The recombinant vector according to Claim 39, wherein said promoter is a promoter of glyceraldehydes-3-phosphate dehydrogenase gene.

Claim 42 (Withdrawn) A transformant containing the DNA according to Claim 12.

Claim 43 (Withdrawn) The transformant according to Claim 42, wherein said transformant belongs to yeast of genus *Saccharomyces*.

Claim 44 (Withdrawn) A transformant containing the DNA according to Claim 13.

Claim 45 (Withdrawn) The transformant according to Claim 44, wherein said transformant belongs to yeast of genus *Saccharomyces*.

Claim 46 (Withdrawn) The DNA array according to Claim 30, wherein said DNA array comprises two or more oligonucleotides.

Claim 47 (New) The method of claim 1, wherein the selected gene increases the concentration of sulfite in the culture medium.

Claim 48 (New) The method of claim 1, wherein the selected gene increases the productivity of alcohol in the culture medium.

Claim 49 (New) The method of claim 1, wherein the gene selected improves flavor.

Claim 50 (New) A method of screening for genes of an industrial yeast which improve flavor comprising:

- (a) comparing polynucleotide sequences of an industrial yeast to genes of *Saccharomyces cerevisiae* (*S. cerevisiae*);
- (b) selecting a polynucleotide sequence of the industrial yeast encoding an amino acid sequence having 70 to 97% identity to an amino acid sequences encoded by an *S. cerevisiae* gene; and,
- (c) determining function of the selected industrial yeast gene wherein the gene selected improves flavor.